



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/732,348 | 12/07/2000 | Yen Choo | 8325-2012 | 1675 |
| 20855 | 7590 | 07/17/2006 | EXAMINER | |
| ROBINS & PASTERNAK 1731 EMBARCADERO ROAD SUITE 230 PALO ALTO, CA 94303 | | | COLLINS, CYNTHIA E | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1638 | |

DATE MAILED: 07/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/732,348 | CHOO ET AL. | |
| | Examiner | Art Unit | |
| | Cynthia Collins | 1638 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2006 and 21 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24,27-33,35-39,41-43,48-50 and 71 is/are pending in the application.
- 4a) Of the above claim(s) 30,31 and 43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24,32,33,35-39,41,42 and 48-50 is/are rejected.
- 7) ☒ Claim(s) 27-29 and 71 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's submissions filed on February 6, 2006 and April 21, 2006 have been entered.

Claims 1-23, 25-26, 34, 40, 44-47 and 51-70 are cancelled.

Claim 71 is new in the amendment filed February 6, 2006.

Claims 24, 27-29 and 32 are currently amended.

Claim 30 is withdrawn-currently amended.

Claims 30-31 and 43 are withdrawn.

Claims 24, 27-33, 35-39, 41-43, 48-50 and 71 are pending.

Claims 24, 27-29, 32-33, 35-39, 41-42, 48-50 and 71 are examined.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

All previous objections and rejections not set forth below have been withdrawn.

Claim Rejections - 35 USC § 102

Claims 24, 32-33, 35-37, 39, 41-42 and 49-50 remain rejected, and claim 38 is rejected, under 35 U.S.C. 102(e) as being anticipated by Cox et al. (US Patent No. 6,534,261, issued March 18, 2003, filed January 12, 1999), for reasons of record.

Applicant's arguments filed February 6, 2006 and April 21, 2006 have been fully considered but they are not persuasive.

In response to the outstanding rejection, Applicants note that the proteins disclosed by Cox were designed to bind to the human vascular endothelial growth factor (VEGF) gene. Applicants point out that by contrast the pending claims are drawn to plant cells. Applicants

Art Unit: 1638

maintain that since plants do not have VEGF genes, the two proteins were designed by Cox to regulate expression of a human VEGF gene, Cox fails to disclose plant cells comprising the claimed molecules, and accordingly, U.S. Patent No. 6,534,261 fails to anticipate the claimed subject matter.

The Examiner maintains that plants need not have native endogenous VEGF genes in order for Cox et al. to anticipate the rejected claims, as the transformation of plants with heterologous genes including human genes was established in the art at the time of Cox et al.'s invention, and the teachings of Cox et al. are not limited to the regulation of native endogenous genes in plant cells (see, e.g., column 1 lines 60-65). The Examiner also maintains that the regulation of genes encoding different proteins may be effected by identical sequences. In this regard it is noted that the rejected claims require a polynucleotide encoding a zinc finger polypeptide comprising at least two zinc fingers, each of said zinc fingers comprising a binding motif comprising the amino acid sequence shown in SEQ ID NO:22, the same sequence disclosed by Cox et al. Since Cox et al. teach all of the required technical features set forth in the rejected claims, Cox et al. anticipate the rejected claims.

Claim Rejections - 35 USC § 103

Claim 48 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Cox et al. (US Patent No. 6,534,261, issued March 18, 2003, filed January 12, 1999) in view of Kim Y.G. et al. (Hybrid restriction enzymes: zinc finger fusions to Fok I cleavage domain. Proc Natl Acad Sci U S A. 1996 Feb 6;93(3):1156-60) and Puchta H. et al. (Two different but related

mechanisms are used in plants for the repair of genomic double-strand breaks by homologous recombination. Proc Natl Acad Sci U S A. 1996 May 14;93(10):5055-60), for reasons of record.

Applicant's arguments filed February 6, 2006 and April 21, 2006 have been fully considered but they are not persuasive.

In response to the outstanding rejection, Applicants note that the proteins disclosed by Cox were designed to bind to the human vascular endothelial growth factor (VEGF) gene. Applicants point out that by contrast the pending claims are drawn to plant cells. Applicants maintain that since plants do not have VEGF genes, the two proteins were designed by Cox to regulate expression of a human VEGF gene, Cox fails to disclose plant cells comprising the claimed molecules, and accordingly, the combined references fail to render obvious the claimed subject matter.

The Examiner maintains that plants need not have native endogenous VEGF genes in order for the combined references to render obvious the claimed subject matter, as the transformation of plants with heterologous genes including human genes was established in the art at the time of Cox et al.'s invention, and the teachings of Cox et al. are not limited to the regulation of native endogenous genes in plant cells (see, e.g., column 1 lines 60-65). The Examiner also maintains that the regulation of genes encoding different proteins may be effected by identical sequences. In this regard it is noted that the rejected claims require a polynucleotide encoding a zinc finger polypeptide comprising at least two zinc fingers, each of said zinc fingers comprising a binding motif comprising the amino acid sequence shown in SEQ ID NO:22, the same sequence disclosed by Cox et al. Since Cox et al. teach all of the required technical features

Art Unit: 1638

set forth in the rejected claims, the combined references render obvious the claimed subject matter.

Allowable Subject Matter

Claims 27, 28, 29 and 71 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form.

Remarks

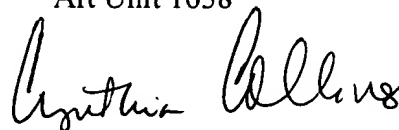
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Collins whose telephone number is (571) 272-0794. The examiner can normally be reached on Monday-Friday 8:45 AM -5:15 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CC

Cynthia Collins
Primary Examiner
Art Unit 1638


7/9/06